TRANSCRIPT OF MEDIA CLIPS-OSF inventor collaborates to help kids play safely through cancer

Pediatric cancer patient's mother, Karisma Morris-Bush

"Ever since she was a little girl she's been very active. She's in gymnastics, she's done cheerleading, she likes to play outside, run around, cartwheels, flips, you name it. Since she was a baby she's been climbing on everything." (:18)

Morris-Bush was concerned about her daughter's safety.

"She has lots of friends who are also very active, and there were incidents in which she was bumped into. I was concerned about maybe it [the port] might be dislodged or put her at some type of risk, and he [Nick Kemp] told me that he was creating this PortGuard. He gave me the entire plan. This is when it was in the beginning stages, and I told him I thought it sounds wonderful." (:26)

Morris-Bush was part of the prototype testing and says the design works, as she turns to Amaneigh and explains it.

"There is a spot right here. It's kind of a circular spot, Amaneigh chimes in and says, "It goes over my port," while mom adds, "Right, and that actually hugs the port and in that spot – and I can even put my hand over it – there's space." Amaneigh adds, "It's like my port has gone into a mold." (:17)

Nick Kemp, exercise physiologist, OSF HealthCare Children's Hospital of Illinois

"It needed to be lightweight, kind of mobile, something that wouldn't get in the way during sports – that they could wear it and not have any type of disadvantage during their sport, so I really wanted it to be as comfortable as possible." (:22)

Kemp is excited that his idea to help pediatric cancer patients is doing just that.

"That's the best part. It's seeing the reactions and seeing them able to do activities and sports that they may not have felt as comfortable doing. So that's the ultimate goal – to get them comfortable and bring them back to the normalcy that they were used to before treatment." (:23)

Reid Jockisch, engineer, OSF Innovation Studio

Jockisch pressure-tested PortGuard to see what kind of impact it could withstand.

"We used balls from different sports – basketballs, baseballs. We threw them at the port to see and try to measure what kind of impact the port would have. That's where the force gauge was. So, we measured what those numbers would be as compared to what it would be with no device, and we were able to get them to almost zero." (:25)

The challenge, says Jockisch, was finding a balance between weight and comfort.

"We had to find lighter materials to encase the device such that when it gets attached with the supports, it's able to stay in place. So, what's been most helpful; there is patient feedback and their experiences wearing the device and what kind of activities were causing the device to shift around so we could design the straps in a way that supports the weight of the device." (:24)

Pediatric cancer patient Amaneigh Stevenson

Amaneigh says she loves her PortGuard.

"It makes me feel protected. It makes me feel safe. I don't wear it often, but I wear it when I'm doing stuff I'm not supposed to do right now in this situation." She adds, "It helps me, and I get to play with all the other kids. I love it a lot." (:23)